



AF/1FW

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 09/000,626  
Applicant : Rajesh Rengarajan et al.  
Filed : December 9, 1997  
TC/A.U. : 2811  
Examiner : Unknown  
Docket No. : 0928.0120C  
Customer No. : 27896  
Title : Recessed Shallow Trench Isolation Structure Nitride Liner  
and Method of Making Same

TRANSMITTAL LETTER

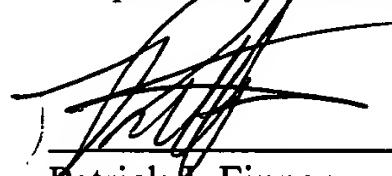
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

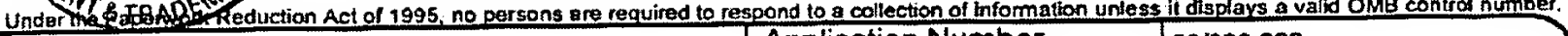
Transmitted herewith for filing in the subject application are a Revocation of Power of Attorney with New Power of Attorney Form (1 page); Copy of Assignment documents (8 pages) and a Statement Under 37 CFR 3.73(b) (1 page).

The Commissioner is hereby authorized to charge payment of any additional fees required for the above-identified application or credit any overpayment to Deposit Account No. 05-0460..

Respectfully submitted,

  
Patrick J. Finnan  
Registration No. 39,189

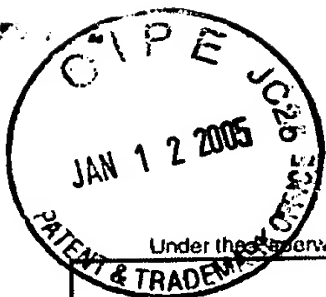
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Application Number	09/000,628
Filing Date	December 30, 1997
First Named Inventor	Rajesh Rengarajan
Art Unit	2811
Examiner Name	Tran, T.
Attorney Docket Number	0928.0120C

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**STATEMENT UNDER 37 CFR 3.73(b)**

Applicant/Patent Owner: Rengarajan et al.

Application No./Patent No.: 09/000,626 Filed/Issue Date: December 30, 1997

Entitled: Recessed Shallow Trench Isolation Structure Nitride Liner and Method of Making Same

Siemens Aktiengesellschaft, a Corporation  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest.  
The extent (by percentage) of its ownership interest is \_\_\_\_\_ %  
in the patent application/patent identified above by virtue of either:

A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: Rajesh Rengarajan, Venkateshram C. Jaiprakash To: Siemens Microelectronics, Inc.  
The document was recorded in the United States Patent and Trademark Office at  
Reel 9204, Frame 0081, or for which a copy thereof is attached.
2. From: Siemens Microelectronics, Inc. To: Siemens Aktiengesellschaft  
The document was recorded in the United States Patent and Trademark Office at  
Reel 9503, Frame 0586, or for which a copy thereof is attached.
3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☒ Copies of assignments or other documents in the chain of title are attached.  
(NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08)

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

München, 08.12.2004  
Date

\_\_\_\_\_  
Telephone number

X Siemens Aktiengesellschaft  
Typed or printed name

X Hashube Klinger  
Signature

X Both authorized officers  
Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



07P7971 US  
UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

FEBRUARY 03 1999

SIEMENS CORPORATION  
ELSA KELLER  
INTELLECTUAL PROPERTY DEPT.  
186 WOOD AVENUE SOUTH  
ISELIN, NJ 08830

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FEB 15 1999

INTELLECTUAL PROPERTY  
DEPARTMENT



\*100851185A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 10/08/1998

REEL/FRAME: 9503/0586  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

SIEMENS MICROELECTRONICS, INC. ✓

DOC DATE: 09/21/1998 ✓

ASSIGNEE:

SIEMENS AKTIENGESELLSCHAFT ✓  
MUNICH, FED REP GERMANY

SERIAL NUMBER: 09000626 ✓  
PATENT NUMBER:

FILING DATE: 12/30/1997 ✓  
ISSUE DATE:

LAWAN FLETCHER, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

ORIGINAL IN VAULT

10-16-1998

FORM PTO-1595

(Rev. 6-93)

OMB No. 0651-0011 (exp. 4/94)



100851185

COVER SHEET

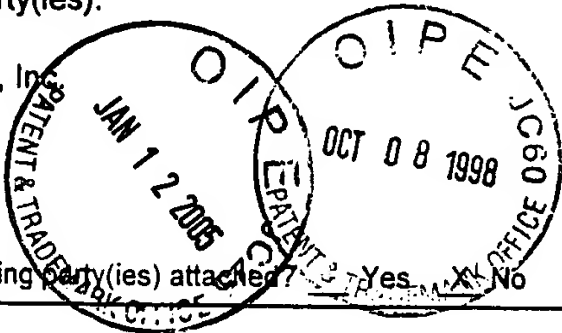
U.S. DEPARTMENT OF COMMERCE

Patent and Trademark Office  
97P7971 US

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

Siemens Microelectronics, Inc.

Additional name(s) of conveying party(ies) attached? Yes ☒ No ☒

## 3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other

Execution Date: September 21, 1998

## 2. Name and address of receiving party(ies)

Name: Siemens Aktiengesellschaft

Internal Address:

Street Address:

City: Munich

State:

ZIP:

Germany

Additional name(s) & address(es) attached? Yes ☐ No ☒

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

09/000,626

B. Patent No.(s)

Additional numbers attached? Yes ☐ No ☒

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Elsa Keller

Internal Address:

Siemens Corporation

Intellectual Property Department

Street Address: 186 Wood Avenue South

City: Iselin State: NJ ZIP: 08830

## 6. Total number of applications and patents involved: one

7. Total Fee (37 CFR 3.41) \$ 40.00

☐ Enclosed☒ Authorized to be charged to deposit account

## 8. Deposit Account No.

19-2179

DO NOT USE THIS SPACE

## 9. Statement and signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Stanton C. Braden, Esq. Reg. No. 32,556

Name of Person Signing

Signature

Date

Total number of pages including cover sheet, attachments, and document: 3

ASSIGNMENT

For good and valuable consideration, We, Siemens Microelectronics, Inc., hereinafter referred to as Assignor, hereby sells, assigns and transfers to Siemens Aktiengesellschaft, a Corporation, organized and existing under the laws of the State of Germany, having its principal place of business in Munich, Germany,

hereinafter referred to as Assignee, its successors, assigns and legal representatives, the entire right, title and interest, in and for the United States and all foreign countries, in and to any and all inventions which are disclosed in the application for United States Letters patent, and which was recorded on reel 9204, frame 0081 on May 14, 1998;

Serial No.: 09/000,626

Filed: December 30, 1997

and entitled: Recessed Shallow Trench Isolation Structure Nitride Liner And Method For Making Same

in and to said application and all divisional, continuing, substitute, renewal, reissue, and all other applications for Letters Patent which have been or shall be filed in the United States and all foreign countries on any of said inventions; and in and to all original and reissued patents which have been or shall be filed in the United States and all foreign countries on said inventions;

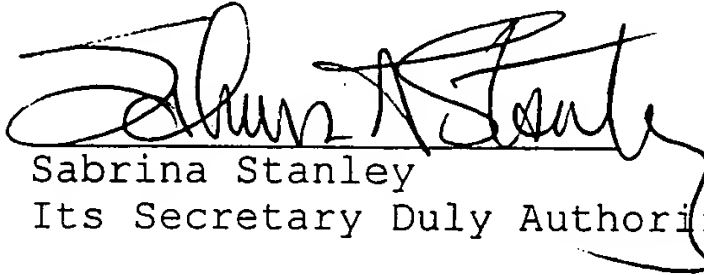
Assignor agrees that Assignee may apply for and receive Letters Patent for said inventions in its own name;

Assignor agrees that, at the request of the Assignee and, without charge to but at the expense of said Assignee, Assignor will carry out in good faith the intent and purpose of this Assignment; execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to Assignee, all facts known to the undersigned relating to said inventions and the history thereof; and generally do everything possible which Assignee shall consider desirable for aiding in securing and mainlining proper patent protection for said inventions and for vesting title to said inventions; and all applications for patents and all patents on inventions in said Assignee;

-2-

Covenant with Assignee that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Siemens Microelectronics, Inc.

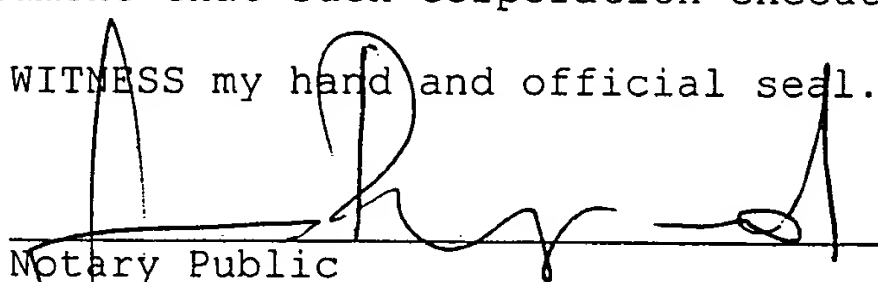
  
Sabrina Stanley  
Its Secretary Duly Authorized

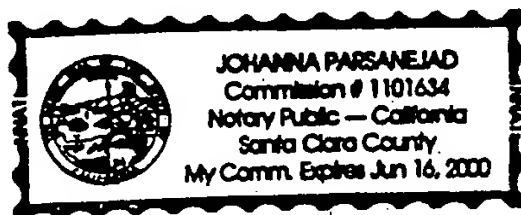
State of California )  
County of Santa Clara )

On this 21<sup>st</sup> day of Sept. 1998, before me, the undersigned Notary Public, duly commissioned and sworn, personally appeared Sabrina Stanley,

X personally known to me  
\_\_\_\_\_ proved to me on the basis of satisfactory evidence to be the person ~~(X)~~ whose name ~~(X)~~ is subscribed to the within instrument, and acknowledged that Sabrina Stanley executed it in her authorized capacity on behalf of the corporation named therein, and that by her signature on the instrument that such corporation executed the same.

WITNESS my hand and official seal.

  
Notary Public





97P7971  
UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

AUGUST 05, 1998

PTAS

SIEMENS CORPORATION  
ELSA KELLER  
INTELLECTUAL PROPERTY DEPARTMENT  
186 WOOD AVENUE SOUTH  
ISELIN, NJ 08830



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UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

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RECORDATION DATE: 05/14/1998

REEL/FRAME: 9204/0081  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

RENGARAJAN, RAJESH ✓

DOC DATE: 04/20/1998 ✓

ASSIGNOR:

JAIPRAKASH, VENKATACHALAM C. ✓

DOC DATE: 04/20/1998 ✓

ASSIGNEE:

SIEMENS MICROELECTRONICS, INC.  
10950 NORTH TANTAU AVENUE  
CUPERTINO, CALIFORNIA 95014

SERIAL NUMBER: 09000626 ✓  
PATENT NUMBER:

FILING DATE: 12/30/1997 ✓  
ISSUE DATE:

KIMBERLY WHITE, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

ORIGINAL IN VAULT



FORM PTO-1595

(Rev. 6-93)

OMB No. 0651-0011 (exp. 4/94)

06-04-1998



100727841

ER SHEET

U.S. DEPARTMENT OF COMMERCE

14 998 Patent and Trademark Office  
Atty Dkt No. 97 P 7971 US

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Rajesh Rengarajan  
Venkatachalam C. Jaiprakash



Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Other \_\_\_\_\_

Execution Date: April 20, 1998

2. Name and address of receiving party(ies)

Name: Siemens Microelectronics, Inc.

Internal Address: \_\_\_\_\_

Street Address: 10950 North Tantau Avenue

City: Cupertino State: CA ZIP: 95014

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

09/000,626

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Elsa Keller

Internal Address: \_\_\_\_\_

Siemens Corporation

Intellectual Property Department

Street Address: 186 Wood Avenue South

City: Iselin State: NJ ZIP: 08830

6. Total number of applications and patents involved: 1

7. Total Fee (37 CFR 3.41) ..... \$ 40.00

☐ Enclosed

☒ Authorized to be charged to deposit account

8. Deposit Account No.

19-2179

DO NOT USE THIS SPACE

9. Statement and signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Stanton C. Braden  
Name of Person Signing  
Reg. No. 32,556

Signature

May 11, 1998  
Date

Total number of pages including cover sheet, attachments, and document: 3

ASSIGNMENT

For good and valuable consideration, I, Rajesh Rengarajan, residing at 808 Hudson Harbor Drive, Poughkeepsie, NY 12601, a citizen of India and ~~V.C. Jai Prakash~~, residing at 39 Hudson View Drvie, #C, Beacon, NY 12508, citizen of India,  
VENKATACHALAM C. JAIPRAKASH

Hereby sell, assign, and transfer to Siemens Microelectronics, Inc., a corporation organized and existing under the laws of the state of Delaware, having its principal place of business at 10950 North Tantau Ave., Cupertino, CA 95014,

hereinafter "Assignee", its successors, assigns and legal representatives, the entire right, title and interest in and for the United States and all foreign countries, in and to any and all improvements which are disclosed in the application for United States Letters Patent,

Ser. No.: 09/000,626  
1997

Filed: December 30,

and entitled: RECESSED SHALLOW TRENCH ISOLATION STRUCTURE NITRIDE LINER AND METHOD FOR MAKING SAME

and in and to said application and all divisional, continuing substitute, renewal, reissue, and all other applications for Letters Patent which have been or shall be filed in the United States and all foreign countries on any of said improvements; and in and to all original and reissued patents which have been or shall be filed in the United States and all foreign countries on said improvements;

Agree that Assignee may apply for and receive Letters Patent for said improvements in its own name, and that, when requested, without charge to but at the expense of said Assignee, their successors, assigns, and legal representatives to carry out in good faith the intent and purpose of this agreement, the undersigned will execute all divisional, continuing substitute, renewal, reissue, and all other patent applications on any and all said improvements; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns, and representatives, all facts known to the undersigned relating to said improvements and the history thereof; and generally do everything possible which said Assignee, its successors, assigns, or representatives shall consider desirable for aiding in securing and maintaining proper patent protection for said improvements and for vesting title to said improvements and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

Gaynes  
4/20/97

-2-

Covenant with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Date: APRIL 20, 1998

Rajesh  
Rajesh BENGARAJAN

Witness: Cynthia Fairchok  
(type name) Cynthia Fairchok

Witness: Axel Ritz Axel Brützi  
(type name)

Date: APRIL 20, 1998

Jayprakash  
~~Rajesh BENGARAJAN~~  
VENKATACHALAM C. JAI PRAKASH

Witness: Cynthia Fairchok  
(type name) Cynthia Fairchok

Witness: Axel Brützi  
(type name)  
Axel Brützi